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NATIONAL SPACE POLICY REVIEW

ISSUE PAPER

ISSUE

Whether the Administration should endorse as a goal of U.S. space policy the expansion of human presence and activity beyond the Earth into the Solar System.

BACKGROUND

On August 15, 1984, the President signed NSDD #144, "National Space Strategy," which directed, in part, that the civil space program "identify major long-range national goals for the civil space program." The Directive states that such goals "are essential to meeting the national commitment to maintain United States leadership in space and to exploit space for economic and scientific benefit." To implement this effort, the Directive provided that the President appoint a National Commission on Space (NCOS) "to formulate an agenda for the United States space program" including "goals, opportunities, and policy options."

Accordingly, a distinguished 15-member Commission was formed, chaired by Dr. Thomas O. Paine, and submitted its report to the President in May, 1986. The "Paine report" contains a number of potential space exploration and exploitation options spanning the next 50 years. Overall, it recommends a long-range U.S. direction that clearly expands human presence and enterprise beyond the Earth into the solar system. The White House Office of Science and Technology Policy is evaluating the Report.

In the meantime, NASA reviewed its major internal goals and purposes, and adopted a far-reaching Statement of Goals which includes, among others, the 21st Century-oriented goal of "Expanding human presence beyond the Earth into the Solar System."

In March, 1987, NASA's Advisory Council completed a study that recommended "further expansion of human exploration of the solar system . . . to provide for enduring value and continuity."

In recent months, NASA and the Administration have come under increasing criticism for an alleged lack of long-range national direction and goals to ensure U.S. space leadership and preeminence.

PROPOSAL

NASA is proposing that the Administration formally endorse the long-range goal of "Expanding human presence and activity beyond the Earth into the Solar System." The Department of State supports this proposal. OMB and DOD oppose. (See Pro and Con arguments below).

As an alternative, OMB has proposed that the policy support activities to "develop the technology to enable the expansion of human presence and activity beyond the Earth into the Solar System." DOD and OSTP endorse the alternative. NASA and State continue to propose the original language. (see Pro and Con arguments for the alternative).

IMPLICATIONS

OMB maintains that the proposed language commits the nation to huge expenditures for space exploration, possibly beginning in FY 1989, and that, without knowing specifically what programs are involved, the general language should not be approved. The National Commission on Space report identified a program cost which would, if all options were approved, roughly double NASA's funding by 1995 (to a level in excess of the peak of the Apollo program in constant dollars).

NASA maintains that the proposed language is consistent with Presidential statements and represents precisely what the words say, no more no less. The language neither specifies nor authorizes any program initiatives. Over time, if the Administration decides to expand human presence and activity into the Solar System, specific programs will be proposed by NASA.

ARGUMENTS FOR NASA/STATE PROPOSED CHANGE

- o This proposed change is 21st century-oriented, and generally endorses a much needed overall direction for manned civil space activity. It carries no specific program objectives, funding, or implementing timeframe.
- o The Solar System is the logical "next frontier" for expanding mankind's understanding and use of the Universe.
- o Human explorers add unique dimensions to the exploration of the solar system through their ability to observe, integrate information, take initiatives, and innovate.

- o Expansion can open up new options for the human species, outside the limits of planet Earth. These include access to vast new resources of materials and energy, and the establishment of new economic enterprises. In the longer term, humans may be able to establish permanent settlements on some solar system bodies.
- o The advance of space technology is freeing mankind to move outward from Earth into the Solar System, and space-faring nations -- notably the U.S.S.R. -- are preparing to move in that direction. Significantly expanded human presence and activity is only a matter of time. The proposed change recognizes this emerging reality. The only real question is which nation(s) will lead humanity into this historic era.
- o The new language projects an outward-looking, strongly competitive America that welcomes expanding human activity into the Solar System as an opportunity for productive challenge and evolutionary progress -- reaping the many benefits that experience has shown will redound to Americans and all mankind. It rejects an inward-looking America that sees future change largely in terms of threat, cost, and risk.
- o The proposed change is the principal theme of the President's National Commission on Space (Paine Report), and, although not yet approved by the Administration, the Report and recommendations add important weight to the argument that this kind of long-range direction is needed both for NASA and the Nation. In any event, there is no reason why this or any other concept cannot be considered in the NSC Review and endorsed in the new NSDD.
- o Opposition to this language is based in part on its allegedly overly general nature with no approved implementing programs. This is a "catch-22" procedure, which, if followed in recent years, would have delayed and possibly killed many of the President's historic initiatives such as SDI, Welfare Reform, Tax Reform, and military build-back from the decline of the '70's. These are all broad Administration priorities and directions, with approved programs following in a reasoned, evolutionary manner.

- o NASA disputes the notion that this nation cannot undertake a major long-term civil space initiative because of SDI resource requirements and limits on the nation's scientific and engineering talent pool. In our view, such assertions also suggest that military and civil space leadership are now incompatible objectives.
- o NASA believes the proposed language is consistent with the President's statement in January, 1987, on the first anniversary of the Challenger accident, when he looked to the future: "In the next three decades NASA will again lead in mankind's dreams." He said, "The space station will be our gateway to the universe" and added "With it as our base camp, we will be able to reach the planets and, perhaps one day, to the stars."
- o In sum, this general and long-range direction of manned activity in space should be acknowledged as an important element of U.S. space policy, and be included in the updated Space Policy NSDD.

ARGUMENTS AGAINST NASA/STATE PROPOSED CHANGE:

- o Although the report of the National Commission on Space contains an explicit endorsement of expansion of human presence into the Solar System, this report has not been approved or endorsed by the Administration. It is, therefore, inappropriate to include any of the recommendations in a national space policy document.
- o Inclusion of language endorsing expansion of human presence into the solar system creates raised expectations within the involved constituencies (manned spaceflight, space science, aerospace contractors). Such expectation inevitably lead to near-term pressure to commit to specific programs -- whether or not these programs serve the long-term needs of the overall national space program.
- o This language has been proposed for inclusion in the "Policy" section of the space policy document. There is no accompanying language in the "Implementation" or "Guidelines" section. In the absence of such language, there is no way of knowing what the implications are to the current space programs or budgets.

- o Inclusion of language that simply proposed to "expand human presence...into the Solar System" without any specific implementing programs could call into question the Administration's credibility. It will be viewed as just another "pie in the sky" goal with no concrete way to achieve it. As Sally Ride has pointed out, "leadership cannot simply be proclaimed -- it must be earned." This nebulous statement simply proclaims.
- o There are no approved programs that would allow the pursuit of this goal. The budget impacts of any expansion of human presence beyond earth are enormous, perhaps \$50-80 billion, and are not adequately addressed in the proposals of NASA and State.
- o Commitments should not be made without consideration of resource requirements. For example, the Administration's prior commitment to the Strategic Defense Initiative (SDI) limits the amount of U.S. resources that can be made available for a major new civil space initiative. Any major new civil space initiative would have to compete with SDI for limited resources of skilled scientists and engineers, other technical personnel, construction of facilities and infrastructure, and industrial production capabilities. Choices would have to be made.
- o Agencies must be able to identify the resources in their budgets as currently approved that would be used to expand human presence beyond Earth. Better costs, benefits, and technology requirements must be identified, before this goal is incorporated into the national space policy.

OMB PROPOSED ALTERNATIVE:

DEVELOP THE TECHNOLOGY TO ENABLE THE EXPANSION OF HUMAN PRESENCE AND ACTIVITY BEYOND THE EARTH INTO THE SOLAR SYSTEM.

ARGUMENTS FOR THE OMB ALTERNATIVE:

- o Manned exploration of space has been compared to exploration of the New World or the American West. There is really little similarity. Exploration of the surface of the Earth has never required total life-support systems, or the level of infrastructure that human exploration of space has and will continue to require. There is much we don't know. All we do know is that the fiscal requirements would be large and probably unmanageable within the context of a balanced space program.

- o The alternative wording supports the first logical step in any exploratory activity -- building a firm technology foundation on which to place program commitments.
- o The alternative wording places technology at the forefront. It allows the technology to drive future commitments rather than letting a premature, open-ended commitment drive the technology. This is a lesson we would have hoped had already been painfully learned in the space program.
- o The alternative wording still provides meaningful, strong, and forward-looking direction to the civil space program. It provides a wealth of opportunity to challenge, for excellence and for evolution -- yet without the kind of near-term budget and program pressure that would be engendered by the NASA/State proposed language.
- o There is a near-term budget impact of the alternative wording. However, since there is no program commitment, these impacts can be accommodated within overall agency budgets, and thus minimize any additional funding requirements.

ARGUMENTS AGAINST THE OMB ALTERNATIVE:

- o Technology base development is a necessary but not sufficient element of the Presidential policy and guidance needed to set the overall long-range direction of the civil space program for well into the 21st century.
- o The OMB "alternative" is in essence not a meaningful alternative since OMB admittedly would require that funding "impacts" be accommodated within NASA's overall budget.
- o The President deserves to have options brought to him for decision that are analyzed in more than a budgetary context. Presidential Space Policy must be based on the full array of national interest and space goals.
- o The alternative is not responsive to the national needs expressed in the case for the NASA/State proposal.